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TOWNSEND AND TOWNSEND AND CREW, LLP
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

EXAMINER	
WOODWARD, CHERIE MICHELLE	
ART UNIT	PAPER NUMBER
1647	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/748,765	GOZES ET AL.	
	Examiner	Art Unit	
	CHERIE M. WOODWARD	1647	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 July 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,12,13,17-22,26-28,and 30* is/are pending in the application.

4a) Of the above claim(s) *2-8* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,12,13,17-22,26-28 and 30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Formal Matters

1. Applicant's Response and Amendments filed 6 July 2009 are acknowledged and entered. Claims 1-8, 12, 13, 17-22, 26-28, and 30 are pending. Claims 9-11, 14-16, 23-25, and 29 have been cancelled by Applicant. Claims 2-8 are withdrawn, as being drawn to non-elected inventions. Claims 1, 12, 13, 17-22, 26-28 and 30 are under examination.

Response to Arguments/Amendments

Objections/Rejections Withdrawn

2. Rejections drawn to cancelled claims 10, 11, 14, and 14 are withdrawn as moot in light of Applicant's cancellation of these claims.

3. The rejection of claims 1, 12, and 13 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement, is withdrawn in light of Applicant's amendments.

Objections/Rejections Maintained

Specification - Objection

4. The objection to the title of the invention as not descriptive, is maintained for the reasons of record. As stated of record, a new title is required that is clearly indicative of the invention to which the claims are directed. The following title is suggested: Methods of Treating Multiple Sclerosis

Claim Rejections - 35 USC § 112, First Paragraph

Written Description

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 17-19, and 22 remain rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement, are maintained for reasons of record and for the reasons set forth herein.

Applicant argues that the amendments obviate the rejection of record (Remarks, p. 6). Applicant's argument has been fully considered, but it is not persuasive.

As stated of record, claims 17-22 are drawn to the method of claim 1 wherein the composition further comprises a genus of ADNF I polypeptides comprising an active core site "having" (read as "comprising") SEQ ID NO: 1 (SALLRSIPA), which, in preferred embodiments, may encompass up to 40 additional amino acids. This translates into a minimum of 4.0×10^{20} possible polypeptides, considering only the standard 20 L-amino acids at each position with an unspecified residue. This number of possible residues increases when D-amino acids are added, as they are in claims 18 and 19. Even if a polypeptide with an active core sequence of SEQ ID NOs: 1 would retain the function of the active core sequence, one of skill in the art would still not know anything about the structure of the claimed genus other than the core sequence of 8 or 9 amino acid residues. When viewed in light of the genus of functional polypeptides comprising 40 amino acid residues, the disclosed sequence of 8 or 9 residues only amounts to less than 20% of the protein structure. Stated another way, only 20% of the structure of the claimed genus of ADNF 1 polypeptides is described. A genus of polypeptides where less than 20% of the structure is disclosed (meaning that 80% or more of the structure is completely unknown) does not have adequate written description. Given this limited disclosure, the full scope of the claims are not adequately described such that one of ordinary skill in the art would be apprised that Applicant was in possession of the claimed genus.

The examiner has shown of record that the genus of ADNF I polypeptides are highly variable in structure (see NCBI references recited in the Office Action of 6 July 2006). In order to comply with the written description requirement, the structure which is asserted to make up the polypeptide must be clearly and positively specified. The structure must be organized and correlated in such a manner as to present a complete operative embodiment which is adequately described in the specification. The instant disclosure fails to provide an adequate description of a sufficient number of ADNF I polypeptides that function to treat MS. The general knowledge and level of those of ordinary skill does not supplement the omitted description because specific, not general, descriptions are needed.

Applicant has not provided sufficient structural disclosures regarding the claimed genus of core sequence-containing peptides. In the absence of sufficient recitation of distinguishing characteristics, the specification does not provide adequate written description of the claimed genus. One of skill in the art would not recognize from the disclosure that the applicant was in possession of the genus. The specification does not clearly allow persons of ordinary skill in the art to recognize that he or she invented what is claimed.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 1, 17, 20-22, 26-28, and 30 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Gozes et al., US Patent 6,613,740 (2 September 2003, priority to 7 February 1997), WO 98/35042 (published 13 August 1998), and Brenneman et al., (US Patent Application Publication US 20020111301, published 15 August 2002) (all previously cited of record), for the reasons of record and the reasons set forth herein.

Applicant argues that the target condition for treatment in the three references of record is a neurological disease or deficiency caused by neuronal cell death, whereas the target treatment in the instant application is MS, an autoimmune disorder (Remarks, p. 7). Applicant argues that the target conditions have distinct underlying causes and etiologies (Remarks, pp. 7-8). Applicant argues that the death of neuronal cells in an MS patient is part of the result or symptom of the pathology, not a cause

(Remarks, p. 8). Applicant argues that the patient populations in the instant case and those of the prior art is distinct and separate (Remarks, p. 8).

Applicant argues that one of ordinary skill in the art would not be motivated to use the claimed invention for treating MS because neuronal cell death is only a symptom of MS and not a cause of a neurodegenerative condition (Remarks, p. 8). Applicant argues that the unexpected discovery in the instant case was that the ADNF polypeptide can suppress unwanted immune cell proliferation and therefore reduce or prevent demyelination caused by immune cells, as discussed by Dr. Gozes in her declaration (Remarks, p. 8).

Applicant argues that the distinct etiologies of neurodegenerative conditions and autoimmune diseases such as MS would also preclude a finding of a reasonable expectation of success (Remarks, pp. 8-9). Applicant argues that the examiner's reasoning is flawed in stating that the claimed method is obvious because there were a finite number of identified, predictable potential solutions to treat related neurological and autoimmune disorders using an ADNF polypeptide because there is no limit in the number of possible ways to treat MS (Remarks, p. 9). Applicant argues that "significant differences between neurodegenerative disorders and autoimmune diseases such as MS negate motivation and reasonable expectation of success" in using an ADNF polypeptide to treat MS and that the results are not predictable (Remarks. p 9).

Applicant argues that the level of effectiveness of treatment of SEQ ID NO: 2 in inhibiting immune cell proliferation and providing neuroprotection in EAE mice is not taught in the prior art references and that this is a surprising result and would not be expected from the cited references (Remarks, pp 9-10).

Applicant's arguments have been fully considered, but they are not persuasive. The crux of Applicant's arguments appear to distinguish the etiology of MS from the etiology of the neurological disorders taught by the prior art. Applicant's arguments are noted, but they are misguided. The etiology of a disorder need not be known to treat the symptoms of a disorder. For example, many disorders of varying or unknown etiology are treated with drugs such as prednisone and methotrexate. The art clearly demonstrates that ADNF polypeptides are very potent at femtomolar concentrations for treating neurological disorders. It also appears that Applicant may have misinterpreted the examiner's statement that neuronal cell death is a direct cause of the symptoms of MS. The examiner did not state that neuronal cell death is part of the etiology of MS, rather, the examiner stated that the loss of neurons due to demyelination is a direct cause of symptoms of MS, such as acute vision loss and motor dysfunction, among others. It would appear that Applicant is aware of this correlation because the specification

specifically recognizes the deal of oligodendrocytes as one of the "hallmarks of MS" (specification p. 1, paragraph 3). The examiner is well aware that the part of the known etiology of MS is autoimmune in nature, although the etiology is not entirely known. However, MS is also classified as a neurological disorder. The lack of full elucidation of the etiology of MS does not detract from the treatment of symtoms of MS, which are neurological as well as immunological. The overlap in symptoms and patient populations diagnosed with MS and other neurological disorders is well know to one of ordinary skill in the art, as demonstrated by the prior art of record and numerous elementary-level publications and texts on MS.

The claims are drawn to a method for treating MS comprising administering a pharmaceutical composition comprisng SEQ ID NO: 2 and further comprising an ADNF 1 polypeptide (in some dependent claims). Applicant should appreciate that the instant rejection is an "obvious to try" rejection under Rationale E (MPEP 2141(III), as permitted by *KSR International Co. v. Teleflex, Inc.* As stated in the Office Actions of record, at the time of the invention, there was a recognized problem or need in the art to treat multiple sclerosis, as evidenced by the cited references themselves. At the time of the instant invention, there were a finite number of identified, predictable potential solutions to treat related neurological and autoimmune disorders using an ADNF polypeptide or active core sequence thereof. One of ordinary skill in the art could have pursued the known potential solutions with a reasonable expectation of success because the '740 patent and WO 98/35042 teach the use of ADNF polypeptides for neurological and autoimmune disorders and Brenneman et al., teach the administration of ADNF polypeptides to treat conditions related to increased neuronal cell death. Neuronal cell death is a direct cause of the symptoms of MS. A person of ordinary skill in the art at the time the invention was made would have reasonably known that the ADNF polypeptides would have been useful in the treatment of neurological disorders, including MS. Moreover, WO 98/35042 teaches a list of specific neurodegenerative disorders and also teaches that those of skill in the art will appreciate that the list of neurodegenerative disorders is not exhaustive and that ADNF III polypeptides can be used to treat other neurological disorders (page 8, lines 16-18). The teachings of the prior art, as cited by the examiner, are sufficient to permit a person of ordinary skill in the art to recognize the use of ADNF polypeptides in the treatment of neurodegenerative diseases, including MS. Moreover, the teachings of the prior art provide the rationale and motivations to choose from a finite number of identified, predictable solutions, with a reasonable expectation of success (see MPEP 2141(III) Rationale E, also recited as Examination Guidelines for Determining Obviousness under 35 USC 103 in view of the Supreme Court Decision in *KSR International Co. v. Teleflex, Inc.*, as set forth of record).

Insofar as Applicant argues that the patient populations in the instant case and those of the prior art is distinct and separate, Applicant's argument is inaccurate. The population of patients with MS are subsumed within the population of patients with neurological or neurodegenerative disorders. MS is a disease that is subsumed under the umbrella classifications of both autoimmune disorders and neurological disorders because the disease destroys oligodendrocytes through demyelination *vis-a-via* an autoimmune mechanism. The teachings of the cited prior art are sufficient to permit a person of ordinary skill in the art to recognize the use of ADNF polypeptides in the treatment of neurodegenerative diseases, including MS. For example, WO 98/35042 teaches a list of specific neurodegenerative disorders and also teaches that those of skill in the art will appreciate that the list of neurodegenerative disorders is not exhaustive and that ADNF III polypeptides can be used to treat other neurological disorders (page 8, lines 16-18).

Regarding Applicant's argument that the examiner's reasoning is flawed in stating that the claimed method is obvious because there were a finite number of identified, predictable potential solutions to treat related neurological and autoimmune disorders using an ADNF polypeptide because there is no limit in the number of possible ways to treat MS, Applicant is reminded that the only treatments that may be considered are those known in the art at the time of the instant invention. There were not, as Applicant posits, an unlimited number of possible ways to treat MS, at the time the instant invention was filed, and there are not an unlimited number of possible ways to treat MS even today. Applicant is also advised to review the language of MPEP 2143(E).

Regarding Applicant's argument that one of ordinary skill in the art would not be motivated to use the claimed invention for treating MS because neuronal cell death is only a symptom of MS and not a cause of a neurodegenerative condition, the claims are not drawn to a cure for MS. Rather, they are drawn to a treatment for MS, which wholly encompasses treating symptoms of MS, including neuronal cell death (i.e. death of oligodendrocytes).

Regarding Applicant's argument that the unexpected discovery in the instant case was that the ADNF polypeptide can suppress unwanted immune cell proliferation and therefore reduce or prevent demyelination caused by immune cells, as discussed by Dr. Gozes in her declaration, the statements in Dr. Gozes' Declaration were noted. However, the fact that another mechanism of action of administration of ADNF was noted, does not negate the teachings of the prior art that administration of ADNF polypeptides are neuroprotective. The fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the

differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Regarding Applicant's argument that the distinct etiologies of neurodegenerative conditions and autoimmune diseases such as MS would also preclude a finding of a reasonable expectation of success, Applicant's arguments are not well founded in light of the discussion above. The examiner is well aware that the part of the known etiology of MS is autoimmune in nature, although the etiology is not entirely known. However, MS is also classified as a neurological disorder. The lack of full elucidation of the etiology of MS does not detract from the treatment of symtoms of MS, which are neurological as well as immunological. The overlap in symptoms and patient populations diagnosed with MS and other neurological disorders is well know to one of ordinary skill in the art, as demonstrated by the prior art of record and numerous elementary-level publications and texts on MS. The etiology of a disorder need not be known to treat the symptoms of a disorder.

The art clearly demonstrates that ADNF polypeptides are very potent at femtomolar concentrations for treating neurological disorders. The reasonable expectation of success comes from the teachings of the references themselves. Methods of using ADNF III polypeptides including the amino acid sequence NAVPSIPQ and SALLRSIPA to inhibit neuronal cell death and promote neuronal cell growth are taught by both the '740 patent and WO 98/35042. For example, the '740 patent teaches treatment of the neuro-autoimmune disease, Guillian-Barre syndrome, using ADNF polypeptides or their active core sequences at column 45, line 7. WO 98/35042 also teaches a long list of neurodegenerative disorders and neuro-autoimmune diseases that may be treated with ADNF polypeptides (p. 60, lines 1-32 and page 8, lines 3-19). Page 8 also recites that those of skill in the art will appreciate that the above list [of neurodegenerative disorders] is not exhaustive and that ADNF III polypeptides can be used to treat other neurological disorders (lines 16-18). As stated of record, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to treat MS in a subject by administering a therapeutically effective dose of an ADNF polypeptide or a peptide comprising the active core site thereof (NAVPSIPQ or SALLRSIPA) as taught by '740 patent and WO 98/35042. Treatment would have been predictable because the '740 patent and WO 98/35042 teach the administration ADNF peptides as therapeutics to treat neurodegenerative disorders. It would have been *prima facie* obvious to one of ordinary skill in the art at the time the claimed invention was made to treat MS in a subject by administering a therapeutically effective amount of an ADNF polypeptide or active core site thereof as taught by the '740 patent, WO 98/35042, and Brenneman et al., with a predictable expectation of success because the '740 patent and WO 98/35042 teach the administration ADNF peptides as therapeutics to

treat Guillan-Barre syndrome, and Brenneman et al., teach the use of ADNF polypeptides to treat conditions related to increased neuronal cell death. Additionally, one of skill in the art would have recognized that the results of the combination of known polypeptides or their analogs to treat related neurological and autoimmune disorders would have yielded nothing more than predictable results to one of ordinary skill in the art at the time the invention was made.

Regarding Applicant's argument that "significant differences between neurodegenerative disorders and autoimmune diseases such as MS negate motivation and reasonable expectation of success" in using an ADNF polypeptide to treat MS and that the results are not predictable, Applicant's bald statements are not supported by any evidence and are contradictory to the prior art of record. One of ordinary skill in the art is well aware of the neuroimmune overlap in MS, just as there is a neuroimmune overlap in Guillane-Barre syndrome. Treatment of MS can be extrapolated as obvious to try from the teachings in the art that demonstrate that administration of ADNF polypeptides are effective in treating neurodegenerative disorders and conditions related to increased neuronal cell death, as stated above and as set forth of record.

With regard to Applicant's argument that the level of effectiveness of treatment of SEQ ID NO: 2 in inhibiting immune cell proliferation and providing neuroprotection in EAE mice is not taught in the prior art references and that this is a surprising result and would not be expected from the cited references, instant claims 1, 17, 20-22, and 26-28 do not recite the limitation that the treatment of SEQ ID NO: 2 inhibit immune cell proliferation. With regard to claim 30, it does not add any new method step to the limitations of claim 1 and is merely drawn to the effects of administration. Consequences of administration do not limit the activity of the peptide. Whatever happens after the method step of administration is going to happen as a function of the administration.

11. Claims 1, 12, 13, 17-22, 26-28, and 30 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Gozes et al., US Patent 6,613,740 (2 September 2003, priority to 7 February 1997), WO 98/35042 (published 13 August 1998), Brenneman et al., (US Patent Application Publication US 2002/001301 A1, published 15 August 2002), and Voet et al., (1995 Biochemistry, 2nd Ed., p. 67) and Goodman et al., (US Patent 4,587,046, 6 May 1986) (all previously cited of record), for the reasons of record and the reasons set forth herein.

Applicant conflates the response to the two rejections under 35 USC 103(a) and argues that the instant rejection should be withdrawn for the same reasons argued above (as set forth above) (Remarks, p.

10). Applicant's arguments have been fully considered, but they are not persuasive for the reasons of record and the reasons set forth above.

Obviousness-Type Double Patenting Rejection

12. Claims 1, 17, 20, and 21 remain rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 21 of now issued US Patent 7,452,867 (previously cited of record as claims 1 and 23 of copending Application No. 11/388,634), as evidenced by Gozes et al., US Patent 6,613,740 (2 September 2003, priority to 7 February 1997), WO 98/35042 (published 13 August 1998), and Brenneman et al., (US Patent Application Publication US 20020111301, published 15 August 2002) (all previously cited of record).

Applicant argues that the subject matter of claims 1 and 21 of the '867 patent is drawn to a method of treating peripheral neurotoxicity and that although the symptoms are similar to MS, they are distinct medical conditions that are not likely to be treated with the same therapeutic agent because a physician would recognize the different underlying etiologies for these conditions (Remarks, p. 11). Applicant also argues that the requisite reasonable expectation of success cannot be established because of the different etiologies of neurotoxicity and MS (Remarks, p. 12). Applicant argues that there is no motivation to use an ADNF polypeptide comprising SEQ ID NO:2 nor any reasonable expectation of success for treating MS (Remarks, p. 12)

Applicant's arguments have been fully considered, but they are not persuasive. As discussed at length above, the art clearly demonstrates that ADNF polypeptides are very potent at femtomolar concentrations for treating neurological disorders. The overlap in symptoms and patient populations diagnosed with MS and other neurological disorders, including neurotoxicity, is well know to one of ordinary skill in the art, as demonstrated by the prior art of record and numerous elementary-level publications and texts on MS. Additionally, the '867 specification defines neurotoxicity as encompassing and including myelinopathy (destruction of the myelin sheath) (column 8, lines 32-44). Peripheral neurotixicity is also defined in the '867 specification as encompassing peripheral neuropathy, a well documented symptom of MS.

The specification of the '867 patent teaches that "[i]In one embodiment, the symptoms of said peripheral neurotoxicity are measured by motor dysfunction, muscle wasting, or a change selected from among a change in sense of smell, vision or hearing, deep tendon reflexes, vibratory sense, cutaneous sensation, gait and balance, muscle strength, orthostatic blood pressure, and chronic or intermittent pain. In another embodiment, the peripheral neurotoxicity is a consequence of treatment with one or more

chemical agents. In another embodiment, the peripheral neurotoxicity is a consequence of treatment with a chemical agent selected from among chemical agents for cancer, multiple sclerosis, gout, arthritis, Bechet's disease, psychiatric disorder, immunosuppression and infectious disease" [Emphasis added] (column 4, lines 1-13; see also claims 1 and 21).

Applicant is reminded that MPEP § 804 (II) states, "When considering whether the invention defined in a claim of an application would have been an obvious variation of the invention defined in the claim of a patent, the disclosure of the patent may not be used as prior art. General Foods Corp. v. Studiengesellschaft Kohle mbH, 972 F.2d 1272, 1279, 23 USPQ2d 1839, 1846 (Fed. Cir. 1992). This does not mean that one is precluded from all use of the patent disclosure." (Emphasis added). "Further, those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in the application defines an obvious variation of an invention claimed in the patent. *In re Vogel*, 422 F.2d 438, 441-42, 164 USPQ 619, 622 (CCPA 1970)."

With regard to Applicant's argument that the requisite reasonable expectation of success cannot be established because of the different etiologies of neurotoxicity and MS, Applicant's arguments are spurious. As set forth above, at length, the etiology of a disorder need not be known to treat the symptoms of a disorder. For example, many disorders of varying or unknown etiology are treated with drugs such as prednisone and methotrexate. The art clearly demonstrates that ADNF polypeptides are very potent at femtomolar concentrations for treating neurological disorders. It would appear that Applicant is aware of this correlation because the specification specifically recognizes the deal of oligodendrocytes as one of the "hallmarks of MS" (specification p. 1, paragraph 3). The examiner is well aware that the part of the known etiology of MS is autoimmune in nature, although the etiology is not entirely known. However, MS is also classified as a neurological disorder. The lack of full elucidation of the etiology of MS does not detract from the treatment of symtoms of MS, which are neurological as well as immunological. The overlap in symptoms and patient populations diagnosed with MS and other neurological disorders is well know to one of ordinary skill in the art, as demonstrated by the prior art of record and numerous elementary-level publications and texts on MS.

Regarding Applicant's arguments that there is no motivation to use an ADNF polypeptide comprising SEQ ID NO:2 nor any reasonable expectation of success for treating MS, Applicant's arguments are contradicted by the teachings of the prior art of record. The motivation and reasonable expectation of success comes from the teachings of the references themselves. Methods of using ADNF III polypeptides including the amino acid sequence NAVPSIPQ and SALLRSIPA to inhibit neuronal cell

death and promote neuronal cell growth are taught by both the '740 patent and WO 98/35042 (cited in the instant rejection as evidentiary references in response to Applicant's arguments). For example, the '740 patent teaches treatment of the neuro-autoimmune disease, Guillian-Barre syndrome, using ADNF polypeptides or their active core sequences at column 45, line 7. WO 98/35042 also teaches a long list of neurodegenerative disorders and neuro-autoimmune diseases that may be treated with ADNF polypeptides (p. 60, lines 1-32 and page 8, lines 3-19). Page 8 also recites that those of skill in the art will appreciate that the above list [of neurodegenerative disorders] is not exhaustive and that ADNF III polypeptides can be used to treat other neurological disorders (lines 16-18). As stated of record, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to treat MS in a subject by administering a therapeutically effective dose of an ADNF polypeptide or a peptide comprising the active core site thereof (NAVPSIPQ or SALLRSIPA) as taught by '740 patent and WO 98/35042. Treatment would have been predictable because the '740 patent and WO 98/35042 teach the administration ADNF peptides as therapeutics to treat neurodegenerative disorders. It would have been *prima facie* obvious to one of ordinary skill in the art at the time the claimed invention was made to treat MS in a subject by administering a therapeutically effective amount of an ADNF polypeptide or active core site thereof as taught by the '740 patent and WO 98/35042 with a predictable expectation of success because the '740 patent and WO 98/35042 teach the administration ADNF peptides as therapeutics to treat Guillan-Barre syndrome, and Brenneman et al. (cited in the instant rejection as an evidentiary reference in response to Applicant's arguments), teach the use of ADNF polypeptides to treat conditions related to increased neuronal cell death. Additionally, one of skill in the art would have recognized that the results of the combination of known polypeptides or their analogs to treat related neurological and autoimmune disorders would have yielded nothing more than predictable results to one of ordinary skill in the art at the time the invention was made. One of ordinary skill in the art is well aware of the neuroimmune overlap in MS, just as there is a neuroimmune overlap in Guillane-Barre syndrome. Treatment of MS can be extrapolated as obvious to try from the teachings in the art that demonstrate that administration of ADNF polypeptides are effective in treating neurodegenerative disorders and conditions related to increased neuronal cell death, as stated above and as set forth of record.

13. Claims 1 and 26-28 remain provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 56-59 of copending US Application 11/838,128. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are drawn to the same or overlapping subject matter.

Applicant argues that the rejection should be withdrawn as the instant case is the earlier filed case (Remarks, pp. 12-13).

Applicant's arguments have been fully considered, but they are not persuasive. Until such time as the instant claims are in condition for allowance, the rejection will be maintained, as long as the copending '128 application is copending.

Conclusion

NO CLAIM IS ALLOWED.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHERIE M. WOODWARD whose telephone number is (571)272-3329. The examiner can normally be reached on Monday - Friday 9:30am-6:00pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Manjunath N. Rao can be reached on (571) 272-0939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cherie M. Woodward/
Primary Examiner, Art Unit 1647